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In re application of: **Aksu et al.**

Application No.: **10/779,318** Group No.: **2143**

Filed: **February 13, 2004** Examiner: **Alina Boutah**

For: **METHOD FOR SIGNALING STREAMING QUALITY ADAPTATION AND CONTROL MECHANISMS IN MULTIMEDIA STREAMING**

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF OF APPELLANTS (37 CFR §41.37)

Sir:

This is an appeal from the final rejection contained in a Final Office Action mailed on January 16, 2007 (the "Final Office Action"), rejecting claims 1-13.

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Marie E. Forte

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Marie E. Forte

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I. REAL PARTY IN INTEREST (37 CFR §41.37(c)(1)(i))

The real party in interest in this action is Nokia Corporation, Keilalahdentie 4, FIN-02150 Espoo, Finland, by virtue of the Assignment dated November 10 and 14, 2003. The Assignment was recorded in the U.S. Patent and Trademark Office on February 9, 2004.

II. RELATED APPEALS AND INTERFERENCES (37 CFR §41.37(c)(1)(ii))

There are no related appeals or interferences.

III. STATUS OF CLAIMS (37 CFR§41.37(c)(1)(iii))

The status of the claims is:

Claims pending: 1-13.

Claims objected to: none.

Claims rejected: 1-13.

Claims on appeal: 1-13.

IV. STATUS OF AMENDMENTS (37 CFR §41.37(c)(1)(iv))

No amendment as to claims 1-13 has been filed subsequent to final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 CFR §41.37(c)(1)(v))

Appellant's invention is directed to a method for signaling and negotiation between a client and a server in a multimedia streaming service regarding the adaptation of the data delivery process. The signaling is carried out by a capability exchange mechanism or by a multimedia stream control protocol. The adaptation of the data delivery process is based one or more attributes of the adaptation mechanisms or capabilities. *See* page 5, line 31 to page 6, line 3.

The invention of claim 1 is directed to a procedure for the negotiation, which includes the following steps:

1. The negotiation starts out with the client sending information to the server indicating what attributes are supported by the client, wherein the attributes

are those defining the adaptation mechanisms or capabilities for use in the data delivery process (page 5, lines 22-26);

2. The server, based on the provided information, selects one or more attributes (page 5, lines 27-30); and
3. The server provides to the client information on the attributes selected by the server so as to allow the client knows what those selected attributes are (page 6, lines 1-2).

The invention of dependent claim 2 is direction to the method in which the client uses a capability exchange mechanism to provide the information to the server (page 5, lines 4-5).

The invention of dependent claim 3 is directed to the method in which the client uses a multimedia streaming control protocol to provide the information to the server (page 6, lines 22-23).

The invention of dependent claim 4 is directed to a procedure where the server indicates its capability before the client sends information on the attributes supported by the client (page 17, lines 3-7).

The invention of claim 5 is directed to a negotiation procedure between two parties including a client and a server regarding the adaptation mechanisms or capabilities in the data delivery process, wherein one party provides information to the other party indicative of the adaptation mechanisms or capabilities, and the response from the other party acknowledging support of the adaptation mechanisms or capabilities (page 5, line 31 to page 6, line 3; page 5, line 22 to page 6, line 2; page 17, lines 3-7)

The invention of dependent claim 6 is directed to a procedure where the server initiates the negotiation (page 17, lines 3-7).

The invention of dependent claim 7 is directed to a procedure where the client initiates the negotiation (page 5, line 22 to page 6, line 2).

The invention of claim 8 is directed to a server device in a multimedia streaming service, wherein the server has

a plurality of adaptation mechanisms or capabilities;

a receiver for receiving information from the client;

a selection mechanism for selecting the adaptation mechanisms or capabilities supported by the client; and

a transmitter for sending to the client information indicating the selected adaptation mechanisms or capabilities by the server (page 2, lines 20-27; page 5, lines 9-14; 27-33).

The invention of dependent claim 9 is directed to the method in which the client uses a capability exchange mechanism to provide information to the server (page 5, lines 4-5).

The invention of dependent claim 10 is directed to the method in which the client uses a multimedia streaming control protocol to provide information to the server (page 5, lines 22-23).

The invention of claim 11 is directed to a client in a multimedia streaming service, wherein the client has:

a selection mechanism for selecting the adaptation mechanisms or capabilities supported by the client;

a mechanism for sending to the server information indicating the selected adaptation mechanisms or capabilities.

a receiver for receiving a response from the server (page 5, lines 6-8; lines 12-20; lines 24-26; page 6, lines 1-5).

The invention of dependent claim 12 is directed to the method in which the client uses a capability exchange mechanism to provide information to the server (page 5, lines 4-5).

The invention of dependent claim 13 is directed to the method in which the client uses to provide information to the server: via a multimedia streaming control protocol (page 6, lines 22-23).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 CFR §41.37(c)(1)(vi))

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Riddle* (U.S. Patent No. 6,175,856) in view of Applicant's Admitted Prior Art (*AAPA*).

VII. ARGUMENT (37 CFR §41.37(c)(1)(vii))

On page 2 of the Office Action, claims 1-13 are rejected under 35 U.S.C. § 103(a) as unpatentable over *Riddle* (U.S. Patent No. 6,175,856) in view of Applicant's Admitted Prior Art (*AAPA*).

(A) Claim 1

It is respectfully submitted that the invention as claimed in claim 1 includes the steps of:

1) the client providing information indicative of the attributes defining the adaptation mechanisms or capabilities regarding data delivery process that are supported by the client;

2) the server selecting one or more of the attributes based on the provided information; and

3) the server providing to the client further information indicative of the selected attributes so as to allow the client to know the one or more adaptation mechanisms or capabilities defined by the one or more attributes selected by the server.

In rejecting claim 1, the Office states that *Riddle* (U.S. Patent No. 6,175,856) discloses all three steps as claimed (Abstract; Figure 6). The Office admits that *Riddle* does not explicitly disclose that the adaptation mechanisms or capabilities are regarding a data delivery process, but points to Applicant's Admitted Prior Art (*AAPA*) (specification, page 1, lines 19-34). The Office also alleges that, at the time the invention was made, one of ordinary skill in the art would have motivated to provide adaptation mechanisms or capabilities regarding a delivery process in order to cause changes of behavior in the network characteristics, therefore allowing successful service.

It is respectfully submitted that *Riddle* is only concerned with the selection of a compression process for compressing data to be transmitted to a remote processor. The selection is in based on information received from the remote processor regarding its decompression processing capabilities. As admitted by the Office, *Riddle* does not suggest or disclose a data delivery process in a multimedia streaming service.

(A)(i) *AAPA*

The section of applicant's specification relied upon by the Office recites:

> In a multimedia streaming service, there are three participants involved: a streaming server, a streaming client and an underlying network which provides the connectivity between the server and the client. The server provides the functionality to deliver the multimedia streaming content to the client. For that purpose, the client and server communicate with each other over the network regarding the methods of capability exchange, content delivery method negotiation, content delivery control, and so forth. Such information exchange can be carried out via well-defined network protocols.
>
> For a multimedia streaming session to be set up and started successfully, the server and the client need to support a minimal set of protocols, which are selected as standard protocols by the service. An example of such a service can be found in 3GPP TS 26.234 V5.1.0, "Transparent End-to-End Packet Switched Streaming Service (PSS); Protocols and Codecs (Release 5)", June 2002, hereafter referred to as TS 26.234). Furthermore, in order for a service to be successful from the data delivery and playback performance point of view, the *data delivery control* mechanisms in the service must also be well-defined. Such mechanisms are used to *adapt* the data delivery process in order to cause the changes of behavior in the underlying network characteristics. (emphasis in original).

It is respectfully submits that applicant sets out to improve the data delivery process in a multimedia streaming system such as those found in 3GPP TS 26.234

V5.1.0, "Transparent End-to-End Packet Switched Streaming Service (PSS); Protocols and Codecs (Release 5)", June 2002 (TS 26.234). Within the context of the specification, the adaptation mechanisms and the capabilities and their attributes are all related to data delivery. In the above paragraphs from the specification, there is no suggestion as how the data delivery process, as defined by TS 26.234, can be improved.

(A)(ii) The cited *Riddle* reference

Riddle is concerned with data compression and decompression. According to *Riddle*, the compressed data transmitting party (processor) determines a list of compressors that it supports and assigns a ranking to those compressors. Before compressing the data for transmission, the transmitting party issues a request to the compressed data receivers for a list of their decompressors so as to allow the transmitting party to select the best compressor to suit the compressed data receivers (see Figure 5). *Riddle* has nothing to do with a data delivery process in a multimedia streaming service. *Riddle* does not suggest a desire or motivation to improve the data delivery process in a system as disclosed in applicant's specification.

(A)(iii) No suggestions or motivation to combine references

As mentioned in Sub-sections (A)(ii) and (A)(iii) above, at the time of applicant's invention, there is no other suggestion as how to improve the data delivery process as disclosed in application's specification. Likewise, *Riddle* does not suggest a desire or motivation to improve the data delivery in a system as disclosed in applicant's specification. The motivation to combine the cited portion of applicant's specification with *Riddle* is derived from applicant's own disclosure.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's own disclosure. *See* MPEP § 2143; *see also In re Vaeck*, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). Applicant respectfully submits that the Office has based the combination of teachings on applicant's own disclosure, because the present invention specifically identifies the need for "a capability identification mechanism to identify the supported adaptation mechanisms or capabilities and an adaptation capability signaling and

negotiation mechanism for the server and client to agree on the usage of a particular set of adaptation mechanisms or capabilities defined within the service context." *See* specification page 2, lines 24-27. The combination of adaptation mechanisms or capabilities regarding data delivery process with the negotiation between the server and client to agree on the usage of a particular set of adaptation mechanisms or capabilities is the invention recited in claim 1.

There is no motivation to implement the system discussed in *Riddle* for a data delivery process without applicant's disclosure specifically pointing out this deficiency in the prior art (see specification page 2, lines 28-30), and suggesting a solution. Applicant acknowledges that information identified in applicant's specification as "prior art" may be treated as prior art. *See* MPEP § 2129. However, when applicant has merely identified a problem, and proposes a solution to the problem, it is impermissible hindsight reasoning to use applicant's own disclosure to provide the motivation to combine the references to arrive at the claimed limitation. *See* MPEP § 2143. Therefore, for at least this reason claim 1 is not disclosed or suggested by Riddle in view of the *AAPA*.

In addition, the Office has not explicitly provided the motivation to combine *Riddle* with the *AAPA*, and therefore has committed clear error by failing to provide motivation to combine the teachings to arrive at the claimed limitations. The Office asserts on page 3 of the Office Action that one of skill in the art would have been motivated to provide adaptation mechanisms or capabilities regarding a data delivery process in order to cause changes of behavior in the network characteristics, therefore allowing successful service. Regardless of the fact that this assertion is derived directly from applicant's own disclosure as discussed above, the Office has still failed to identify a reason why one of skill in the art would combine the teachings as asserted by the Office. The motivation offered by the Office is insufficient because it merely identifies the combination asserted by the Office to be obvious. It is insufficient for the Office to assert that the combination would allow "successful service," without providing some suggestion, motivation or teaching that one of skill in the art would recognize that the combination would result in "successful service." Therefore, the assertion that the combination would be successful overlooks the requirement that there must be some motivation to make the combination before it can be realized that the combination would

in fact be successful. As such, the Office has committed clear error by failing to explicitly provide proper motivation to combine the teachings, and instead has relied upon improper hindsight reasoning in asserting that the claims are obvious.

Furthermore, even if *Riddle* is combined with the *AAPA* as suggested by the Office, all the limitations recited in claim 1 would not be disclosed or suggested by the combination. The *AAPA* only states that the data delivery control mechanisms in the service must be well-defined, and that such mechanisms are used to adapt the data delivery process in order to cause the changes of behavior in the underlying network characteristics. *See* specification page 32-35. However, the *AAPA* mentions nothing about signaling and negotiation of mechanisms used to adapt the data delivery process as discussed in claim 1. Therefore, for at least this additional reason, *Riddle* and the *AAPA*, alone or in combination, fail to disclose or suggest all of the limitations recited in claim 1.

(B) Claims 5, 8 and 11

The Office uses the same ground for rejecting claim 1 in rejecting claims 5, 8 and 11. For at least the reasons discussed above in relation to claim 1, independent claims 5, 8 and 11 are also not disclosed or suggested by *Riddle* in view of the *AAPA*.

(C) Claims 2-4, 6, 7, 9, 10, 12 and 13

As for claims 2-4, 6, 7, 9, 10, 12 and 13, they are dependent from claims 1, 5, 8 and 11 and recite features not recited in claims 1, 5, 8 and 11. Therefore, these dependent claims are patentable at least in view of their dependencies.

For the above reasons, Riddle, in view of AAPA, fails to render claims 1-13 obvious.

VIII CLAIMS APPENDIX (37 CFR §41.37(c)(1)(viii))

1. A method for signaling and negotiation between a client and a server in a multimedia streaming service, wherein a plurality of adaptation mechanisms or capabilities for use in the service for data delivery are supported by the client, each adaptation mechanism or capability having an attribute, said method comprising:

the client providing information indicative of the attributes defining the adaptation mechanisms or capabilities regarding data delivery process that are supported by the client;

the server selecting one or more of the attributes based on the provided information; and

the server providing to the client further information indicative of the selected attributes so as to allow the client to know the one or more adaptation mechanisms or capabilities defined by the one or more attributes selected by the server.

2. The method of claim 1, wherein the client is configured to provide the information via a capability exchange mechanism.

3. The method of claim 1, wherein the client is configured to provide the information via a multimedia streaming control protocol.

4. The method of claim 1, further comprising

the server providing indication of a capability to the client prior to the client providing information.

5. A method for signaling and negotiation between two parties including a client and a server in a multimedia streaming service, wherein a plurality of adaptation mechanisms or capabilities for use in the server for data delivery are supported by the client, each adaptation mechanism or capability having an attribute, said method comprising:

providing by one of the two parties to the other of the two parties information indicative of one or more adaptation mechanisms or capabilities regarding data delivery process; and

conveying a message from said other party to said party, in response to the information, acknowledging supporting of said one or more adaptation mechanisms or capabilities.

6. The method of claim 5, wherein said one party is the server and the other party is the client, and wherein

the client acknowledges support by using the attributes defining said one or more adaptation mechanisms or capabilities in the responding message.

7. The method of claim 5, wherein said one party is the client and the other party is the server, and wherein

the client is configure to provide a plurality of attributes; and

the server is configured to select one or more of the provided attributes based on the provided information for acknowledging the support.

8. A server device in a multimedia streaming service, comprising:

a plurality of adaptation mechanisms or capabilities for use in the service for data delivery, each adaptation mechanism or capability having an attribute;

a receiving mechanism configured to receive information provided by the client, the information indicative of the attributes defining the adaptation mechanisms or capabilities regarding data delivery process that are supported by the client;

a selection mechanism, responsive to provided information, for selecting one or more of the attributes based on the provided information; and

a transmitting mechanism for providing further information indicative of the selected attributes so as to allow the client to know the one or more adaptation mechanisms or capabilities defined by the one or more attributes selected by the server.

9. The server device of claim 8, wherein the information is provided by the client via a capacity exchange mechanism.

10. The server device of claim 8, wherein information is provided by the client via a multimedia streaming control protocol.

11. A client device in a multimedia streaming service, the service comprising a server having a plurality of adaptation mechanisms or capabilities for use in the server for data delivery, each adaptation mechanism or capability having an attribute, said client device comprising:

a selection mechanism configured to select attributes defining the adaptation mechanisms or capabilities regarding data delivery process that are supported by the client device;

a conveying mechanism for providing information to the server; and

a receiving mechanism for receiving further information from by server, wherein the information indicative of the selected attributes by the client device for allowing the server to choose one or more of the selected attributes based on the information; and wherein the further information is indicative of the chosen one or more of the selected attributes by the server.

12. The client device of claim 11, wherein the information is provided via a capacity exchange mechanism.

13. The client device of claim 11, wherein information is provided by the client via a multimedia streaming control protocol.

IX. EVIDENCE APPENDIX (37 CFR §41.37(c)(1)(ix))

There are no evidences submitted pursuant to 37 CFR §1.130, 1,131 or 1,132.

X. RELATED PROCEEDING APPENDIX (37 CFR §41.37(c)(1)(x))

There are no prior decisions rendered by a court or the Board in any proceeding identified pursuant to 37 CFR §41.37(c)(1)(ii).

CONCLUSION

It is respectfully submitted that the present invention as claimed is readily distinguishable over the cited

Respectfully submitted,

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